

FARM CONDITIONS IN PIEDMONT NORTH CAROLINA.

Observations of Mr. Thomas A. Caine of the United States Soil Survey on Farming in Catawba, Lincoln, Burke, Caldwell, Alexander, and Iredell Counties.

The latest report of "Field Operations, Bureau of Soils, United States Department of Agriculture," contains the report of the soil survey of the "Hickory Area," North Carolina—located mostly in the Piedmont section of Western North Carolina. The area is rectangular, containing about 988 square miles, or 632,128 acres. It includes parts of Catawba, Lincoln, Burke, Caldwell, Alexander, and Iredell Counties. Concluding a lengthy and detailed account of the work of the soil survey party, Mr. Thomas A. Caine gives an interesting review of agricultural conditions and possibilities in the territory indicated. We are confident that it will interest all Progressive Farmer readers in this section, and as the book is not for free distribution, we reprint herewith Mr. Caine's observations:

SOIL PROBLEMS.

There are two chief soil problems before the farmers of the Hickory area. One is particularly limited to the area north of Catawba River, and is the restoration of the fertility and productiveness of many farms in that part of the area. The present plight of these farms is due to the careless and inefficient methods of cultivation, among which may be enumerated the absence of a proper system of rotation of crops, the constant cropping to cotton, or wheat, shallow plowing, improper or imperfect cultivation, inviting gullying, and the leaving of the fields unprotected by vegetation during the winter season, thus accentuating the loss of fertility by leaching and washing.

Much of the area in these farms can be rejuvenated by a reversal of these methods, by adding to the crop rotation one or more of the legumes, and by increasing the number of live stock carried on the farms and husbanding the manure made by these animals in consuming the forage afforded by the legumes, the corn fodder, and the native grasses.

Deeper plowing, gradually letting the share cut deeper year by year, and thus bringing only a little of the subsoil to the surface in any one year, will be found of great value both in renewing the fertility of the worn-out fields and in decreasing the tendency of the soils to wash. The increasing of the porosity of the soil by incorporating with it the stubble of clover and cowpeas and coarse stable manure also helps to prevent washing, while at the same time adding needed organic matter.

The other problem is the reclamation of the bottom lands, many of which have become in recent years too wet for cultivation, or, even where cultivable, subject to more frequent overflow than formerly. This change has resulted from the silting up of the channels. Some of the bottom land along the Catawba River, the most valuable soil for the production of corn and grass, is today almost valueless because of a thick deposit of barren white sand brought down by the flood of the spring of 1901.

The chief factors in the deterioration of the bottoms are the rapid deforestation of immense areas of mountain woodlands and the constant shallow cultivation of the fields in cotton and corn. The removal of surface soil by the heavy rains is, as a result, greatly increased, and the filling up of the stream channels and flooding of the meadow areas follows. The proper tilling of the fields will tend to decrease the amount of silt carried by the streams. The springing up of young forests on the denuded mountains will tend to lessen the frequency of floods, and in time the streams may again deepen their channels so that drainage of the bottom lands will be re-established and their cultivation re-entered upon. Those areas covered with deposits of pure sand are prob-

ably permanently ruined as far as agriculture is concerned, unless subsequent floods shall add other material or remove the sand deposits.

AGRICULTURAL CONDITIONS.

The whole area has been an agricultural one since the time of its first settlement. The section about Newton, Hickory, and Lincolnton is very prosperous. The lands have the highest average value of any in the State. This prosperity is due primarily to the abundance of Cecil clay and a good type of Cecil sandy loam, and the favorable climatic conditions, together with the sturdy, industrious class of people who own these lands.

In recent years the railroads have opened up ready markets for farm products. Until very recently these communities were purely agricultural ones, but the abundance of excellent cotton and timber lands and good water power, together with the tendency of industries to move southward, is gradually transforming this section into an industrial community, so that some of the old towns have doubled their population, and new towns have grown up around the cotton mills and furniture and wagon factories. This additional growth has created additional demands for farm produce, so that farming is receiving new stimulus. Formerly considerable tobacco was grown in the area, but when most of the tobacco factories of the State went into the hands of one company the growers in less favored localities had to abandon this crop, because of lack of competition in the tobacco market.

The owners of the soil are nearly all descendants of the sturdy German and Scotch-Irish stock who first settled that section of the country, and in many cases the farms have remained in the hands of the same family from the time of settlement. The farms are small, the average size being about 125 acres. The owners do their own work and do not depend upon the inefficient labor of the locality. The lands are free from mortgage and there is an abundance of improved machinery. The houses are substantial, and the barns and sheds, though not pretentious, are sufficiently large to house the crops of such a climate. There is a diversity of crops, so that a failure of one does not mean a failure for the year. There are no very wealthy farmers and no very poor ones, so that all are about on an equality. Not much of the land is for sale, but there are plenty of opportunities for poor men to start a home. The lands can be cleared and planted without the expense of fencing, as the stock law protects the crops. For such a prosperous section the wagon roads are very bad, but the property owners are now beginning to realize that good roads enhance the value of their property.

A Cultivator That Works Both Sides of the Row.

Editors Progressive Farmer:

For the information of "a Warren County farmer," in this week's paper, I think Geo. W. Smith, a practical farmer, has the cultivator he desires; price \$6.00; operated with one-horse. He writes me this cultivator he uses three times on young cotton, two times on corn and saves time and work. I have ordered one and intend using it this season. His address is La Grange, Ga.

THEO. EDWARDS.
Greene Co., N. C.

I see an article in The Progressive Farmer of April 19th under the head of "Cultivators and Farm Tools," with the query from a Warren County reader, asking if there is "a cultivator that can be run astride the cotton and corn while the plants are small?"

I infer that he means a small, light cultivator that can be drawn by one horse and work both sides of plants at once. There is such a cultivator, and it is one of the best farm tools that can be used for not only corn and cotton while small,

but for all plants, just after they come up, and clear up till they attain the height of ten or twelve inches.

The cultivator I refer to is so arranged that one horse can draw it as easily as he can an "Iron Age Cultivator." Walking on left side of row, the cultivator goes astride and does up both sides nicely at once. The man walking behind guides it with handles the same as he would the "Iron Age" when cultivating only one side. The name of this implement is "Queen of the Field." I do not know where it is manufactured, but it is sold by the local hardware dealers in New Berne at \$4.50 each. As our Bro. C. W. Burkett says: "There are a number of cultivators that do just what our correspondent wishes, but the team straddles the row, so to speak," but it takes two teams to draw them, and I have failed to see one yet that can be used to cultivate tender plants while small. They are alright for cultivating the land and making rows before crops are planted and for cultivating crops after well up and growing; but for young and tender plants they cannot be worked satisfactorily on stiff lands with heavy clay subsoil.

There is nothing that can beat the "Iron Age" for cultivating one side, or "Queen of the Field" for cultivating both sides of the row at once when plants of any kind are small and just starting to grow.

The Progressive Farmer is a welcome visitor to us each week, and I am glad to see it steadily improving in information to the farmers.

With best wishes for The Progressive Farmer and all its readers, I am,

Sincerely,
Craven Co., N. C. G. L. HARDISON.

Successful Fruit Growers.

Editors Progressive Farmer:

If there is anything that modern agriculture teaches it is that more skill, knowledge, and experience are required in successful fruit growing than almost any other branch of farming. There are more failures with fruit farms than any other. There is consequently heard the cry in nearly every State that there is no money in fruits, and farmers are turning their attention to other lines of farm work. Yet in spite of this the last census shows some interesting figures which goes to prove that fruit growing, when properly conducted, is the most profitable of farm specialties. Compared with other farm products, the best fruit farms of specially favored locations yielded 25 per cent on the capital employed against 19 per cent in general farming, and 17 per cent on grain and hay. Only the nursery business and flower and plant growing exceed fruit raising, and these latter were possible only where the soil and climate were very favorable.

The claim that fruit growing successfully requires experts is absolutely true. Almost any one can raise pigs, poultry, and general crops, and can make a moderate living. But few can produce fine fruits. A great many start in with the idea they can, and then after failing, as a result of their ignorance, they condemn the whole business. It is not unnatural that they should influence others to believe that there is no money in raising fruits.

Fruit growing requires more head work than most branches of agriculture. The farmer must understand how to raise fancy fruits, and how to sell them. If he cannot do either he must fail. It is no novice's work to raise fine fruits. There must be skill and experience, a knowledge of varieties and species, and a spirit of enthusiasm which makes one strive for the highest. Brains and labor combined never counted for more than to-day on the fruit farm. The man who possesses the ability and push to raise fine fruits is in a fair way to make something more than a good living.

It is a good thing probably that the incompetent are dropped out of the fruit business. Their failure is an assurance to the reliable and intelligent growers that they will make more profit. These ignorant novices give the whole fruit business a bad name. It is not that they frighten others from the business by their complaints, but that they lower the standard of market fruits with their poor, half-matured products. They actually demoralize some markets, which must inevitably affect the goods of those who have been careful in their work. The sooner we get rid of the croakers in the fruit business, the better it will be for the whole trade, and we can afford to lose them.

S. W. CHAMBERS.